

# *Clostridium difficile* (C. diff)

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## What is *Clostridium difficile* infection?

*Clostridium difficile* infection also known as “C. diff, is a diarrheal illness caused by the germ (a bacterium) *Clostridium difficile*. *C. difficile* can be found in the soil but it is also commonly found in the hospital environment. It can be found in the stool of people with infection and also in the stool of people without symptoms (carriers). Most cases of *C. difficile* infection happen in patients who are taking or have taken antibiotics and who have been exposed to healthcare settings. Antibiotics can destroy the “good” bacteria in the intestines allowing *C. difficile* to grow.

## What are the symptoms of infection?

The most common symptoms are watery diarrhea (usually 10 or more bowel movements per day which can contain blood or mucous), fever, loss of appetite, nausea, and abdominal (stomach) pain and tenderness. It is also possible to carry *C. difficile* in the bowel and have no symptoms.

## How is *C. difficile* spread?

*C. difficile* can form spores which can exist and remain infectious for a very long time. These spores are not killed by temperatures or other things that kill bacteria that do not form spores. *C. difficile* is spread from person-to-person. Spores from *C. difficile* can be found in many environments, especially in healthcare facilities on bed rails, light switches, and medical equipment. They can also be carried on the hands of healthcare providers after caring for a patient who has *C. difficile*. Improper handwashing and incomplete environmental cleaning of hospital rooms and bathrooms can put individuals in these settings at risk of getting the infection.

## Who is most at risk of *C. difficile* infection?

Since spores from this germ can live outside the body for a very long time, nursing homes and hospitals have become common places for the elderly and patients taking antibiotics to get this infection. Child care facilities have also become places where *C. difficile* can be a problem. This germ can be found in the stools of healthy newborns and young infants without causing infection. People with prolonged exposure in any of these settings or in contact with a person with *C. difficile* infection are at higher risk of getting *C. difficile*. It mostly affects people taking antibiotics, but is also more likely to affect the elderly and people with bowel disease or other medical conditions. It is less likely to be a problem in children.

## How is *C. difficile* diagnosed?

Your healthcare provider must examine you and send your stool sample to a laboratory. The laboratory then tests the sample for the presence of *C. difficile* or the toxins (poisons) the bacteria produce. It is the toxins that cause the damage in the intestines.

## How is *C. difficile* infection treated?

In most cases infection with *C. difficile* can be treated with certain antibiotics. *C. difficile* can recur, however, after treatment ends. In very rare cases serious infection can result and surgery may be required to remove part of the intestines.



## How can you prevent *C. difficile* infection?

- Soap and water works the best against *C. difficile*. Always wash your hands **thoroughly** with soap and water before eating or handling food and after using the bathroom.
- Make sure all doctors, nurses, and other healthcare providers wash their hands with soap and water or with an alcohol-based hand sanitizer before and after caring for you. If you do not believe your healthcare provider has washed their hands, please ask them to do so.
- Only take antibiotics as prescribed by your healthcare provider.
- If you are taking care of someone who has *C. difficile* or any kind of diarrhea, scrub your hands with plenty of soap and water after cleaning the bathroom, helping the person use the toilet, or changing diapers, soiled clothes or soiled sheets.
- Disinfect surfaces that may have been contaminated by an individual with diarrhea or any other symptoms of *C. difficile*. Use a disinfectant with “sporicidal” on its label or a fresh 1:10 dilution of household bleach and water. These will kill *C. difficile* spores. However, keep in mind that bleach solutions must be handled with care as they can irritate your skin, eyes, nose and respiratory secretions. Use them in a well-ventilated area.

## What are hospitals and other facilities doing to prevent the spread of *C. difficile*?

To prevent transmission of *C. difficile*, hospitals and long-term care facilities have infection control measures in place.

- Doctors, nurses, and other healthcare providers should regularly wash their hands with soap and water before and after caring for every patient. They may also wear medical gowns and gloves while caring for patients with *C. difficile*.
- All rooms and bathrooms in hospitals and long term care facilities should be thoroughly cleaned on a regular basis and all waste should always be properly handled and disposed of.
- Contact with infected patients should be limited. Whenever possible, patients with *C. difficile* should have their own room or only share a room if the other patient also is infected with *C. difficile*. Hospitalized patients with *C. difficile* should avoid common areas in the facility as much as possible. Visitors may be asked to wear protective gowns and gloves.

Children in daycare who are infected with *C. difficile* may also be excluded while they have active diarrhea in order to reduce transmission to the other children.

## Where can you get more information?

- Your doctor, nurse or health care clinic
- The Centers for Disease Control and Prevention (CDC) website at: [http://www.cdc.gov/HAI/organisms/cdiff/Cdiff\\_infect.html](http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html)
- Your local board of health (listed in the telephone directory under “government”)
- The Massachusetts Department of Public Health (MDPH), Division of Epidemiology and Immunization at (617) 983-6800 or toll-free at (888) 658-2850, or on the MDPH website at <http://www.mass.gov/dph>

